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ERYSIPELAS AND PUERPERAL FEVER.¹

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SAID Bacon, "I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor, by way of amends, to be a help and ornament thereunto."

As a rule it can be safely said that though country practitioners are by nature and habit the equals of their city brethren in keenness and accuracy of observation, yet they are not as often in the habit of methodically recording their cases and giving the profession at large the result of their experience as the former, and in consequence they hide their lights, and much information that might prove of vast benefit to the brotherhood and to mankind in general is lost; while on the other hand, medical men of the cities enjoy frequent intercourse, and report and converse upon their cases for the mutual advantage of themselves and their country brethren. Not that much beneficial knowledge has not proceeded from the villages, yet I believe the balance to be largely in favor of the cities. Partially in view of this, and believing, with a recent writer on this same subject, "that matters of general professional interest must inevitably be unearthed even by a most careless observer," I have consented, though with many misgivings and considerable reluctance, to read you what I have imperfectly seen in treating, during the past winter, cases of erysipelas and lying-in patients at the same time.

I have no new theory to advance regarding the causation of puerperal fever, of which so much has been said and written, often acrimoniously and dogmatically, and concerning which men of eminence and undoubted ability and scientific attainments have widely differed, so that after consulting the authorities one is quite as much at a loss to understand the nature of the terrible malady as before the perusal of the thousands of pages that have been penned about it. I would not have the physician relax one effort in the employment of prophylactic measures, but on the contrary would urge him to redouble his vigilance to prevent the occurrence of a disease, of which even the precursory symptoms

¹ Read before the Massachusetts Medical Society, and recommended for publication in the JOURNAL.

are sufficient to strike terror to the strongest hearts, he who has had the fullest experience dreading it the most, — heroic and mild remedies, scientific and empirical treatment often proving alike unavailing in preventing a fatal termination.

I of course would not attempt to refute the testimony of the army of medical men whose experience seems indisputably to prove that there is a connection between erysipelas and puerperal fever, that in an epidemic of the former the latter is more likely to occur than at other times, but I am strongly inclined to think that if every epidemic of erysipelas were reported, it would be seen that in many of them puerperal fever did not prevail either epidemically or sporadically, and that in many instances in which they did coexist, unmistakable evidences of the presence of some septic material other than erysipelas would have been discovered if the practitioner had not allowed himself to be blinded by inclining too readily to the belief that erysipelas was the all-potent cause, — the subtle, unrecognized agent continuing to act (perhaps *with* the erysipelas) until disastrous consequences ensue; for we know from published statistics that not every epidemic of erysipelas is accompanied or immediately preceded or succeeded by puerperal fever, and that many times not the slightest connection is noticed between the two; that in those instances the connecting link, that is, the essential element in the production of childbed fever, is absent; that erysipelas alone is impotent; and that the difficult problem to be solved is to discover this missing link, or to point out the surroundings, atmospheric influences, or the peculiar condition of the patient that favors its production. It has been variously designated by different writers: "an atmospheric condition;" "an altered condition of the blood, consisting mainly of pus;" "a profound dyscrasia of the individual constitution;" "epidemic influence," which an author defines as "this all-pervading, incomprehensible, subtle, and deadly influence;" "another element unknown;" "septicæmia and pyæmia;" while some regard it as an "essential fever," and that there is a modification of the general organism, occurring antecedent to the local lesions; Dr. Collins's observation seemed at first to prove that it was derived from local causes rather than anything noxious in the atmosphere, though his views were subsequently changed. Some believe firmly in its contagious nature, while others stoutly deny it. Meigs says that he cannot tell what is an epidemic cause, since it is uncognoscible, recon-dite, and beyond the scope of human understanding. He scoffs at the idea of erysipelas being identical with puerperal fever. Many country physicians take this same ground. Within a few months I have conversed with several who tell me they do not hesitate to attend cases of erysipelas and lying-in cases at the same time, and have never noticed bad results. Dr. Minor, in his work on this topic, cites many instances of epidemics of erysipelas and puerperal fever that went hand in hand, yet

also shows by many illustrations that they did not always coexist. The opinion that the two maladies are identical, or that one is caused from the other, does not prevail as largely as many suppose. A remarkably strong case against the power of idiopathic erysipelas to produce child-bed fever was that reported by Dr. Boardman before the Obstetrical Society of Boston, and published in the *JOURNAL* of November 16, 1876, as follows: "Mrs. M. was recently pregnant six or seven months with her fourth child, the exact duration being unknown, as the catamenia had not been present since the birth of her previous child. In consequence of receiving two severe blows in rapid succession upon the left side of her abdomen, the membranes apparently were ruptured, and a large amount of fluid escaped from the vagina. Two weeks later labor was completed suddenly, and a living child was forced from her while she was standing. Two days later the child died. During the day on which she was confined, one of her children complained of feeling unwell, and of a pain in the side of his face. On the following day he presented a well-marked facial erysipelas upon this side, which subsequently involved the entire face and scalp, and was attended with very high fever. Convalescence became fully established on the eighth day, the disease running a normal course. During his week's illness he was confined to his bed, alongside that of his mother. It is a rare occurrence for a puerperal woman and a patient with erysipelas to remain in such immediate juxtaposition, and the result was watched with no little anxiety as well as interest, especially when we consider that the several accidents in the interval must have had a prejudicial effect upon the system of the woman in childbed, and may, perhaps, have rendered her condition more favorable for the reception of the erysipelatosus poison to which she was exposed so greatly. Fortunately, however, she recovered rapidly from her confinement without any unusual or unfavorable symptom. Dr. Boardman remarked that it is held by some writers that idiopathic erysipelas possesses no element of danger in connection with the puerperal condition.

"Dr. Sinclair said that he had raised a similar question in reference to a case which had come under his own observation."

I will briefly sketch the series of cases observed by myself recently, but will first glance at the sanitary condition of the town of four thousand or five thousand inhabitants in which they occurred, for I do not regard it as a particularly healthy locality, and cannot see why the poison of erysipelas could not be as easily propagated here as elsewhere, and if it is such a prolific source of puerperal fever, why its baneful results were not exhibited.

At the extremity of Cape Cod there is a narrow, sandy point thrust out into the sea; vegetation scanty; natural soil porous, though most of the residences are surrounded by imported soil; a few swamps half

a mile north of the village; a body of water three or four miles long, formerly salt, now dyked off from the sea and become fresh, emitting noxious odors in the hot months; houses built closely together, most of them being very near the water of the magnificent harbor on the shores of which the town stands. The drinking-water is mainly supplied by tubular wells, located in many instances without regard to cess-pools and privies. But little typhoid fever prevails in its season, though dysentery, cholera morbus, etc., are common at certain times. Throat, bronchial, and lung diseases abound in cold weather. Many foreigners reside here in an over-crowded but not over-neat condition. The Americans are tidy about their premises, but many do not believe in the "new-fangled notions" about hygiene. The breezes of ocean fan the town almost unceasingly, and there are but very few moist valleys to catch or engender malarious poisons. During the occurrence of my cases scarlet fever was epidemic in the town.

My first patient, Mrs. M., the wife of a clergyman, was attacked with erysipelas November 19, 1876. The face and scalp, the seat of the disease, were badly swollen and covered with bullæ; the accompanying fever was severe. From two to five visits were made daily, the suffering being great. Convalescence took place at about the ninth day. By December 1st she was able to move about the room, but on December 4th was again attacked, though with less severity, convalescence beginning in five or six days.

On November 22d Mrs. L. was confined with a son. The surroundings of the patient were of the worst character, the family being destitute; house very small, the patient having little or no care. Recovery rapid.

November 24th. Mrs. McK. was confined with a son. Comfortably situated. Good recovery.

November 26th. Mrs. W. was confined. Labor tedious. Surroundings healthy and care good. Convalescence uninterrupted.

December 11th. A Scotch girl was attacked with phlegmonous erysipelas of the hand, attended with severe constitutional symptoms, and in two weeks erysipelas of the face and scalp set in. She was very ill.

Mrs. N. was seized with erysipelas of the face and scalp December 21st. The disease was attended with the usual constitutional symptoms. Patient under treatment a fortnight.

December 19th. Mrs. O. C. was confined with a daughter. December 24th. Mrs. C. with a daughter; on the same evening Mrs. McD. with a daughter. All convalesced normally. On the 25th Mrs. B. with a daughter.

Mrs. L. W., after wounding her hand with a splinter of wood, had erysipelas of the hand and arm, with constitutional symptoms setting in.

January 12th. The parts were greatly swollen and painful. The accompanying fever was high. Several visits were made daily.

Mrs. O'N. was confined January 9th (I still being in attendance upon the Scotch girl). Convalescence uninterrupted.

On the 18th inst. Mrs. H. was delivered of a daughter. There was some fever on the third day, which continued for three or four days; but as there was retention of urine, requiring the use of the catheter several times daily, with cystitis and inflamed and tender vulva, the milk being secreted at the same time, and as there was no diarrhoea nor abdominal tenderness, and the patient was up in a fortnight, I concluded that my attendance upon the erysipelatous case had nothing to do with the febrile attack.

The following case is introduced to illustrate how favorable the circumstances seemed to be at this time for the production of puerperal fever, if scarlet fever is an important element in its causation, and to sketch briefly a case of scarlatina as a complication of the puerperal state, believing it not to be irrelevant to the topic under consideration: Mrs. B., primipara, was confined March 15th, after a moderately easy labor of two and a half or three hours. She had not been at any house where there was or had been scarlatina, but ten days previous to her confinement she was visited by a friend who had been with a case of scarlet fever. Forty-eight hours after her labor her pulse quickened, face flushed, and she vomited several times. The following morning her arms and chest were covered by a scarlatinous eruption. There were retention of urine, loss of appetite, scanty secretion of milk, some abdominal tenderness; lochia scanty and exceedingly offensive; vulva and meatus urinarius very tender. No sore throat. Fever did not subside before the eighth day. Desquamation occurred, beginning with the face. Convalescence very tedious and not completed at the middle of May. During my attendance upon this case I delivered several women, among them a twin case, the patient living in a house scarcely better than a hovel, surrounded by discomforts. In none of the cases was the recovery delayed.

On the 8d of April Mrs. Y. was attacked with severe febrile symptoms attending erysipelas of face and scalp. On the 7th inst. Mrs. J. H. was delivered of her third child. Forty-eight hours previous to her labor she had a fall upon the coccyx, which was so painful as to deprive her of sleep and to oblige her to summon medical assistance. Her recovery, with the exception of the pain and lameness resulting from the accident, was rapid.

This completes my list of cases of erysipelas and puerperal cases that were attended together during the past winter. In years past I have had similar cases of which no record was kept, though the result was the same.

It may be said that so few cases prove nothing; but it seems to me that they do demonstrate that not every parturient patient is endangered by the obstetrician being in attendance upon an erysipelatous case; that something is needed with the virus of erysipelas to produce childbed fever, and that this "something" is what the physician is to guard against, though in our present state of knowledge regarding this disease, as has been stated, it is impossible to define it, and we have to contend against an obscure and incomprehensible cause. I believe that the theory that erysipelas, traumatic or idiopathic, is a ripe source of puerperal fever often misleads the physician in his endeavor to understand the etiology of this much-discussed disease, and perhaps ere this the occult influence would have been fathomed, if it were admitted that erysipelas, scarlet fever, etc., were powerless *per se* to develop puerperal fever. I knew a medical man who gave by mistake mild chloride of mercury, for subnitrate of bismuth, for the vomiting of pregnancy, and who could not see what made his patient abort and have ulceration of the mouth and fauces and necrosis of the jaw. He was positive that the chloride was not the poison he was dealing with, but investigation demonstrated that that was the agent which entailed the suffering and subsequent disfigurement, and if employed as he used it it would do so every time. So the accoucheur may be dealing with unrecognized toxicological agents (*real*, if hidden), while he ascribes the pitiable condition of his puerperal patient to diseases which, to say the least, unaided by this all-pervading, incomprehensible, subtle, and deadly influence, have not the power to produce puerperal fever, and in order to avert the calamitous results that follow in its train it must be sought out and understood, and every effort in every case must be made to render the condition of one's patient proof against its insidious attacks. If puerperal fever be contagious, as many claim, the sporadic cases must be closely guarded and discreetly treated; and if erysipelas, or typhoid or scarlet fever be ever a secondary element in the etiology of childbed, it must be so managed that it shall become innocuous.

Is it too hopeful to believe that, in the progressive march of medical science, these difficult problems will yet be solved by the zealous and untiring efforts of thousands who are laboring to lessen the physical suffering of humanity? The practical question to-day is, What can be done to counteract the effect of this morbid influence, — the essential element in the production of puerperal fever, — and to prevent its generation? What means can be used to fortify the puerperal woman against its ravages during epidemics, or its alarming results when occurring sporadically? When we consider the condition of the uterus and vagina of a patient immediately after delivery, it excites our wonder that there are not fewer favorable convalescences after normal labors. What an easy method for the imbibition of poisonous secretions in

the patulous and bleeding uterine orifices and the frequently lacerated tissues! What a rife source of inoculation in portions of retained placenta and shreds of membrane left to decompose in the uterine cavity! Undoubtedly, "meddlesome midwifery is bad," but a slack, do-nothing midwifery is sometimes as mischievous. There are certain things that it is better to do at the conclusion of every natural labor than to leave undone, in order to promote the comfort and recovery of the puerperal patient, fortifying her against the stealthy attack not only of the disease under consideration, but of others that prolong convalescence and endanger life.

I believe it to be important after the delivery of the fœtus to see that not only the placenta is extracted entire, but also that the uterus is emptied of clots and bits of membrane, which is best effected by the administration of a reliable preparation of ergot and by pressure, the former to be administered just previous to the birth of the child, the latter performed first by the hands of an assistant and afterward by a binder properly applied; to prevent the subsequent formation of clots by enjoining perfect rest and quiet, and, if required, the further administration of ergot; to order the application to the vulva of clean cloths, with a sprinkling of carbolic acid or other antiseptic; and if attendants are obliged to handle the parts to advise the previous use by them of carbolic acid. Early attention to the bladder, the unloading of the alimentary canal by the third day (a practice becoming obsolete with some physicians) and syringing the vagina with an antiseptic, not waiting for the lochia to become offensive, are of importance, and best of all a sensible nurse who is not "half a doctor herself," and who is willing and ready to carry out the directions of the physician "with the spirit and with the understanding also." If cases of erysipelas are being attended, the topical use of carbolic acid and the observance by physicians and attendants of the strictest cleanliness are essential, not forgetting the antiseptics; in short, a strict espionage upon patients and employes, barring the doors against garrulous pseudo-friends, and the use of discretion in diet, neither starving nor gorging the patient; appropriate remedies as occasion requires are called for, neither overdosing nor abstaining from the use of drugs, not losing sight of the patient until convalescence is well established. With all these, and still other and better precautions, we are fearful that "the pestilence that walketh in darkness" will yet claim many a fair victim; still, nothing daunted, the physician will pursue and combat the "unknown cause," happy in the thought that his persevering labors may in some case have stayed the hand that has afflicted and made desolate so many happy homes.

REMITTENT SUBACUTE MENINGITIS.

BY S. PUTNAM, M. D., MONTPELIER, VT.

THE discussion upon Meningitis simulating Intermittent Fever, published in a recent number of the JOURNAL, has led the writer to offer the following report of a case which it is hoped may be of interest to the members of the Society for Medical Observation:—

February 25, 1870. Robert W., aged fourteen years, was taken with chills or tremulousness after going to bed, during which the respiration was hurried and noisy, the speech unintelligible, and the mind overpowered; soon, however, reaction occurred, and he became feverish and delirious through the night. In the morning the symptoms passed off; he rose, dressed, took breakfast, and went about his usual pursuits through the day. During the day he complained only of having felt several turns of momentary giddiness or partial loss of consciousness. The following night he was again affected as above described. On the third day of his attack he remained in bed, though he would have risen had not his parents objected. For three days he remained comfortable, but was then again seized with loss of speech, rapid and noisy breathing, during and after which he could be made to understand but little.

On the morning of March 2d, I was called to see the patient and obtained the foregoing imperfect history of the case. I found the lad with a pulse of 70 per minute; skin cool and pale; complaining of headache above the right eye; very little heat of the head; pupils very large and contracting slowly on exposure to light; conjunctivæ not congested; tongue slightly coated; no nausea; bowels constipated; free and frequent discharge of urine. The patient called for food, promptly put out his tongue, and correctly answered questions at the moment asked; he was constantly calling his attendants, even if they were already present, talking, counting, and reaching for imaginary objects. There had been no rigidity of the muscles discovered. Temperature in axilla, 98° F. The patient was of lymphatic temperament, but had had good health. He had recently been excited in school, and nine months ago received a blow upon his forehead; within two or three weeks he had been dispirited and more forgetful than usual, the day before his present attack having made a decided and unusual blunder about his work, and a neighbor had seen him in the street appearing as though he had "lost his senses" for a short time. Meningitis, Bright's disease, and obscure chronic brain affection occurred to me. I prescribed foot-baths, sinapisms, a cathartic, and bromide of potassium. The patient rested but little during the night, and was inclined to get off his bed, continually talking. Temperature 98°.

A second cathartic operated well on the 4th, but did not modify the symptoms. The urine continued free and was not albuminous. Pulse 80; temperature 98°.

March 5th. The patient was much the same except that he was inclined to sleep most of the time since he took five grains of Dover's powder.

March 6th. The eleventh day of the disease he said he felt "first-rate;" called for food, and was talkative again. Pupils large and inactive; no nausea; no squinting; temperature 100°. To have Dover's powder at night if he did not sleep.

March 7th. Was quieted by the powder, but was evidently getting worse; much carphologia and griping. The bromide was continued with the iodide of potassium. Blisters were applied behind the ears, and one compound cathartic pill was given.

March 9th. Bowels moved two or three times; patient no better; with slight assistance got to the chair, and occasionally attempted to get off the bed to execute some reverie of his morbid fancy; temperature in axilla 98°. Was becoming daily more debilitated and emaciated, though nourishment was often administered.

March 13th. Patient continued much the same until the 12th, when he became more stupid; respiration frequent and obstructed by mucus; pulse rapid and small. A resort to stimulants had seemed to rally the vascular system, but nerve power became more depressed; intelligence less; evacuations involuntary; right eye blood-shot, pupil larger than its fellow and immovable; pulse 120, temperature 103°. He moved very little, lay mostly upon one side or the other, but was not palsied. Quinine and iodide of potassium were given, and the blisters were renewed.

March 14th. Patient comatose, pulse frequent and tense, and temperature 104°. No rigidity or spasmodic action, except tremulous rolling of the eyes. He gradually sank, and died on the morning of the 15th, eighteen days after he was taken ill.

Autopsy. On opening the cranium the vessels were found very dark and full, and along their course, between the arachnoid and pia mater, fibrinous matter and pus were deposited. In some places the product had assumed the form of small grains. That portion of the coverings of the medulla oblongata resting upon the basilar process was densely covered with plastic matter. There were two ounces or more of serum in the arachnoid cavity. The central portion of the right anterior lobe of the cerebrum was softened to the extent of an inch or more in diameter, not diffuent.

It may be, perhaps, questionable whether this case was primarily one of meningitis or of softening in the right anterior lobe, from embolism or some other cause resulting in meningitis. The post-mortem appear-

ances answer very well to what Niemeyer describes as "tuberculous basilar meningitis," except the location of the softening, which in this case could not have arisen from compression by neighboring fluid. The earlier symptoms were not those of tubercular meningitis, but of disturbed cerebral function, and existed months before the apparent occurrence of meningitis, which it would seem must have begun in a remittent or subacute form on the night of February 25th. The parents say they have seen their son occasionally put his hand to his right temple and complain of pain since receiving a blow in that region nine months before. Those accustomed to see the boy also think that he has been affected through the winter, at times appearing "not to know what he was about." Could concussion from a blow have thus resulted, and no marks of surrounding inflammation have remained?

I have since regretted that sufficient time was not bestowed upon the examination to demonstrate, if possible, the cause of the softening and whether tuberculosis existed in the chest or abdomen, though indications of such a state had not been observed. That a person should be about after a severe attack of meningitis I think is very unusual, though Watson and Flint speak of somewhat similar cases. They remark on the frequent obscurity of the invasion, and mention cases that were treated for intermittent fever, gastritis, etc. Niemeyer speaks of remittent types of epidemic cerebro-spinal meningitis, and says that "occasionally alternations occur several times, usually with a more or less regular quotidian type." Again, this case is obscure as regards temperature: once only, before the near approach of death, did the thermometer indicate a temperature above 98°, and at no time a less degree. Physicians of broader experience may have seen similar cases. The temperature during the earlier stages of the disease being normal and the pulse at 70 per minute, would, I think, contra-indicate acute or pulmonary tuberculosis.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.

BY D. H. HAYDEN, M. D.

*Remarks on Scarlet Fever.*¹—At the meeting of the Berlin Medical Society, held November 15, 1876, Dr. Henoch made the following remarks on scarlet fever, an epidemic of which existed in Berlin at the time. First, with regard to its malignity: it has been the custom of late to ascribe this entirely to the high temperature; yet this is in part only the cause, for the nervous symptoms peculiar to the malignant form are very frequently absent in other diseases, as, for example, in typhus fever, where the temperature is equally high for an

¹ *Berliner klinische Wochenschrift*, February 11, 1877.

equal length of time. In the majority of cases we must look for the cause in the specific action of the scarlet-fever poison. Next to the nervous centres it is particularly the heart which is affected by the virus. The albuminuria is often only a symptom of the heart's weakness, which causes a stagnation of the circulation in the kidneys. Scarlet-fever poison has also a great tendency to cause inflammation, with necrosis (the so-called diphtheritic inflammation) of certain mucous membranes. Such inflammations must not be confounded with the "diphtheria" which is an infectious disease, having a specific poison peculiar to itself, which can under certain circumstances, as in hospitals, be combined and coexist with scarlet fever. To prevent such confusion Dr. Henoch recommends the adoption of another name for diphtheria, as, the "*cynanche contagiosa*" of Senator. One of the symptoms, from a prognostic point of view the most unfavorable, in severe cases of scarlet fever is an obstinate diarrhoea, as a cause for which the autopsy does not show any catarrh of the intestinal mucous membrane, the most that is found being a swelling of Peyer's patches and of the solitary follicles. Second, as regards the treatment: in the beginning, when the temperature is high, the symptoms dependent thereupon (the malignant symptoms) must be combated antipyretically; but the use of cool or cold baths is not to be recommended, as the results from them are far from being encouraging. In this disease the danger of collapse is much greater than in typhus fever. Lukewarm baths at a temperature of 88° to 90° Fahrenheit are of much better service. In the same manner the use of salicylic acid requires great caution, owing to the danger of collapse. In malignant cases, beyond a certain degree of infection, treatment is perfectly powerless. In cases of a medium degree of severity stimulants are especially useful, such as wine and coffee, and of medicines camphor is preferable to musk for this purpose. When there is difficulty of swallowing, this can be given subcutaneously, dissolved in alcohol, which increases the stimulating properties of the camphor; but to prevent inflammation the alcohol must be diluted with equal parts of water.

There exist still very different views with regard to the nature of the kidney affection in scarlatina. The amount of blood found in the urine in different cases varies very much. The so-called hæmorrhagic as well as the non-hæmorrhagic form can run its course without fever as well as without any complication. The treatment for both forms is the same. In the front rank stand purgatives when diarrhoea does not exist; next comes acetate of potash, the use of which is unattended by any danger. Dr. Henoch commonly gives in addition Wildungen water for a drink. With this treatment many cases run a favorable course in from eight to fourteen days. When this is not the case the time has arrived for the use of astringents, especially ergotine or tannic acid, and later

the liquor ferri sesquichlorati. During the course of a case of nephritis there often supervenes weakness of the heart, with slowness or irregularity of the pulse, without being accompanied by any of the symptoms of uræmia.

Dr. Nathanson remarked upon the frequency with which epidemics of scarlet fever and puerperal fever made their appearance at the same time. He had also found that puerperal women, during epidemics of scarlet fever, were more subject to puerperal fever. Both diseases, too, have certain symptoms in common, as an uncommonly high pulse and a disposition to diphtheritic inflammation, so that there is some reason to consider the two diseases as resembling each other.

Dr. Wiss alluded to the fact established at the International Medical Congress held at Philadelphia, that the acute exanthematous diseases as met with in the United States are more frequently of the malignant type than in Europe, without, as a rule, being complicated with the diphtheritic affection of the throat. During a practice of thirteen years in the United States he was in the habit of giving in the first days of the disease an infusion of cinchona, and had seen the best results from it. For the dropy he had found digitalis with juniper berries useful.

Dr. A. Baginsky agreed perfectly with Dr. Henoch as to the influence of high temperature in scarlet fever. The high temperature of fevers is only dangerous when of long continuance. When children, sick with scarlet fever, after one attack of vomiting become somnolent, lose their consciousness, and die a few hours later, it does certainly look as if they had succumbed to the action of some powerful poison. Dr. Baginsky did not consider, however, that the poison of scarlet fever acted with particular severity upon the heart. In the first place the complexity of symptoms of paralysis of the heart is wanting. In some cases with very rapid pulse we do find a very imperfect arterial tension; in other cases, however, the tension is perfectly good, and yet the children become gradually moribund. Secondly, the pathognomonic sign of absence of the second tone of the heart, as is seen in such a striking manner in cholera, is wanting. In the stage of impending paralysis of the heart in cholera we find the patient's consciousness but slightly impaired, whereas in scarlatina this is a prominent symptom. It is more in accordance with experience to regard the action of the poison as affecting indiscriminately all parts of the organism. In looking back upon the history of scarlet fever and of its treatment, we find that the latter has taken two directions the opposite of one another. One group of physicians have treated it as an inflammatory disease with antiphlogistic remedies; the other group have rapidly had resort to stimulating measures. History proves the former to have had the more favorable results; and these then went so far as to attribute the malignity of the disease to the use of stimulants. If this statement is

an exaggerated one, still it is a fact that the use of mild cooling remedies and abstaining from too energetic treatment offer the best results. Inasmuch as the removal of the effects of the scarlet-fever poison is a gradual one, the above-mentioned mild remedies are those most favorable to recovery. Nature points out the way to this by pushing forward the poison to the skin, and finally removing it by desquamation. For this reason the treatment should be directed towards the skin; and the speaker always resorted to baths, not, however, with the design of acting in an energetic manner antipyretically, and never employing a temperature lower than 81.5° Fahrenheit. After the bath the child should be wrapped in a linen sheet, covered lightly, and after an hour the body should be inuncted with lard. By this treatment the speaker felt sure that he had saved lives that would otherwise have been lost. He recognized clearly that in cases of malignant scarlet fever, and where there are serious complications, this treatment is often equally powerless with all others; but since the adoption of this treatment he had had less mortality than previously. One result of this treatment is a less protracted desquamation. This stage is often marked only by a slight roughness of the skin, and the peeling off of large flakes of skin is never seen. When the temperature of the bath, after the disappearance of the fever, is raised to 92° Fahrenheit, even if there be albuminuria, the appearance of dropsy is much more rare, and this symptom is never found to be very severe. With regard to nephritis, although the use of baths in many cases is not followed by decisive results, he had never seen any evil effects from them. He could not agree with Dr. Henoch's views on the action of tannic acid. He was inclined to consider its use in some cases, especially where used early, as a dangerous remedy, and had often seen hæmaturia supervene during its employment. As to diuretics, there comes a time in the course of scarlatinal nephritis when their employment is useful, but it is difficult to define exactly when that time is. Where micturition is scanty, but at the same time the urine is clear, highly albuminous, and contains fatty granular detritus in large amount and but few red blood corpuscles, and when at the same time the children are pale and considerably bloated, diuretics should be used carefully. The speaker had been much impressed in one such case, where baths and cathartics had been used without success, by the great benefit which followed the use of juniper, the oedema rapidly disappearing with the production of active diuresis. A very unfavorable complication in scarlatina was icterus, which, if nephritis coexisted, could cause very unpleasant symptoms; Nothnagel's explanation was that the deposit of bile pigment in the kidneys produces great disturbance in the circulation and an impediment to diuresis. In one case that came under the speaker's observation there was complete suppression of urine for three and a half days. The child recovered under the use of juniper berries, and the only symptoms present were nausea and headache.

Dr. Senator asked what had been Dr. Henoch's experience in the treatment of scarlatinal affections of the throat. It appeared to him that the confusion now reigning with regard to the so-called "diphtheria," especially the different views entertained as to the value of local treatment in the pharynx, depended upon the mistake of regarding the affection in the pharynx in scarlatina and diphtheria proper as one and the same disease. In diphtheria there is a great disposition of the affection in the pharynx to extend into the larynx, which is not the case in scarlet fever. For this reason Dr. Senator disapproved entirely of the use of irritating or caustic applications to the throat in diphtheria, whereas in scarlatina there would be no fear of doing harm by their use. With regard to the treatment of nephritis in scarlet fever, he made use of acetate of potash, with or without digitalis, in the very earliest stages with good results. Its diuretic action is partly explained by the fact that it is changed in the body to an alkaline carbonate, and the urine is thus made alkaline or neutral, by which means the albuminous casts and epithelial detritus that block up the urinary tubules are dissolved, and the flow of urine is again set up. He had seen the best effects follow the use of warm and hot baths, even in cases where albuminuria had already set in.

Dr. Henoch said that with regard to the stimulating method alluded to by Dr. Baginsky, he recommended it only for the malignant cases. The affection of the pharynx, whether in scarlatina or in diphtheria, he treated without energetic local applications, for the reason that it was accompanied with so great difficulties. He used inhalations or injections of a two per cent. solution of carbolic acid or of other allied substances, and applied ice compresses to the neck. A relationship between puerperal fever and scarlatina he considered not demonstrated; and the disposition of women, after confinement, to scarlet fever he thought explainable by the large "wound surface" in the uterus. For this reason during scarlet-fever epidemics a healthy woman, during convalescence from confinement, takes scarlet fever and not puerperal fever.

Dr. Nathanson thought that during an epidemic of scarlet fever such patients, in a majority of instances, take puerperal fever and not scarlet fever.

Dr. K. Langenbeck asked if cases of gangrene were often observed in scarlet fever. He had seen three such cases. One was of the nose, another of the extremity of a finger, and in the third case, a child of ten years, the scarlet fever had had a regular and normal course, when suddenly there set in gangrene of the eyelids and of the toes. Such cases appear to have always a fatal termination.

Dr. Henoch had seen in one case decubitus, and in one case there was gangrene of the nostrils. Both cases terminated favorably.

Dr. Leligsohn had within a few days, in a case of scarlet fever, seen a perforation of the hard palate take place. Dr. Wilms, who saw the case at the same time, had a short time previously seen a similar case.

Dr. Simon had observed in a case of scarlatina gangrene of the scrotum, with recovery.

*Artificial Food in Earliest Infancy.*¹ — The following can be considered as the effects upon "morbidity, mortality, and nutrition," established by the authors' experiments with various substitutes for breast milk employed by them in their asylum when the nurses' supply is not sufficient (two infants being given to each nurse). The articles in use by them were: condensed Swiss milk, Scotch oat meal, fresh cow's milk, and Nestle's powder.

Children during the first five days of life were almost invariably made sick by any one of the above substitutes, which caused disturbances of digestion, and the rate of mortality was increased. Between the fifth and fifteenth day the Swiss condensed milk acted the most favorably, one part to nine of water. After the fifteenth day the proportion used was one part to seven, or two parts of this solution and one part of freshly-boiled cow's milk. After the second month Nestle's powder was by far the most satisfactory substitute. At the best, however, the attempt to use artificial food of any kind before the end of the first month gave most discouraging results. The authors' method of employing substitutes with infants during the first five days of life was to alternate the breast with the artificial food, giving the former five times daily and the latter four times. The amount taken at each meal varied from two to three ounces. The attempts to increase the digestibility of cow's milk by the addition of soda or gelatine in the authors' hands were not successful.

(To be concluded.)

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

APRIL 28, 1877. Eighty-one members were present, the president, DR. H. W. WILLIAMS, in the chair.

Expedients in Gynecological Practice. — DR. JAMES¹ R. CHADWICK made the following remarks: —

Having always held the opinion that a multiplicity of instruments is but a poor substitute for skill, it has been my aim to make the few instruments which I habitually carry in my bag answer many purposes. As some of these devices may prove useful to others I shall venture to lay them before the society.

¹ Monkewitz and Kruse. Annual Report of the Imperial Foundling Asylum at St Petersburg. St. Petersburg med. Wochenschrift, No. 7, 1877. Allg. med. Central-Zeitung, March 3, 1877.

(1.) *Wool wadding* for vaginal tampons and the application of acids to the uterine cavity I have found much more serviceable than cotton-wool, because it absorbs fluids more rapidly, as you see, and can be wound upon the instrument more easily, and it never gets matted. If cotton-wool, however, be used its absorbent qualities may be much increased by boiling in hot water. For tampons it will be found occasionally convenient to affix several to the same string, at distances of about three inches.

(2.) For *intra-uterine applications* I employ the wire stilets from the common English catheter. If the ends of these be roughened with a file they answer the purpose quite as well as the silver instruments with handles, which are sold for one or two dollars. If it be desired to leave a wad of wool, saturated with a styptic, in the cavity of the uterus to check hæmorrhage, this may be readily effected by inserting the wire into a catheter, about three inches of the closed end of which has been cut off; let the wool then be twisted loosely round the protruding end of the wire, soaked in the solution, and introduced; if the catheter be then held firmly and the wire withdrawn the wool will be left in the uterine cavity. The catheter and wire are cheap and efficient substitutes for Sims's whalebone staff and silver canula. For the removal of such wads from the cavity Dr. Sims has devised a modification of a corkscrew, which works well, but may be dispensed with if the operator will simply lay a piece of twine upon the wool alongside the wire, and will by careful manipulation roll the wool round the two at once; the two ends of the twine then being tied together, the wool is passed into the cavity; the next day the patient can extract it by drawing upon the loop of twine which passes through its centre.

(3.) *Uterometer*. Many appliances have been attached to the uterine sound to mark the distance to which it enters the uterine cavity. This object may be perfectly attained with the ordinary sound, when introduced through the speculum, by putting a little dab of grease near its end; this will be pushed by the external os out upon the instrument, as it enters, and on withdrawal will indicate the depth to which the sound has penetrated. Occasionally the grease will partially adhere to the os, but by watching it during the withdrawal of the sound it can easily be seen whether the upper or the lower margin of the grease marks the length of the uterine cavity.

(4.) *Syringes*. In the middle of one night, about a year ago, I was trying to check profuse hæmorrhage from a carcinomatous uterus by injecting through an elastic catheter a solution of liquor ferri perchloridi by means of a hard-rubber syringe. I was disturbed to find that its barrel had so warped as to allow the fluid to escape round the piston rather than be forced through the eyes of the catheter, which were probably plugged with blood clots and the tissues of the growth. In this emergency I saved myself a long journey home in search of another syringe by unscrewing the cap of the barrel, applying my mouth to its open end, and blowing into its cavity while the syringe was held perpendicularly. The force of gravity, of course, kept the fluid at the bottom of the barrel, whence it was forced through the catheter by the inflation. The hæmorrhage was at once arrested. Lately I incised a Bartholin's gland which was in a state of chronic suppuration. The pus that issued was so offensive

that I thought it advisable to wash out the cavity of the abscess. I accomplished this, in the absence of a syringe, by filling my mouth several times with water and squirting it through a clean catheter into the cavity of the abscess.

(5.) *Aspiration*, with any of the instruments, is often a tedious process and requires considerable apparatus. In removing fluids from the abdominal and pelvic cavities, I have partially avoided these obstacles of late by using the aspirator needle with simply a long rubber tube attached. By allowing the latter to hang down I make a siphon, which exercises considerable aspiratory action. The flow is of course started and maintained for some time by the abdominal tension, supplemented by pressure of the hands or of a swathe. Regurgitation, which might be feared toward the end of the operation, with the introduction of air into the evacuated cavity, is prevented by letting the end of the tube lie beneath the surface of the fluid in the basin.

A common Davidson's syringe, affixed to the canula and allowed to hang down, will act in precisely the same way, while the flow may be accelerated by squeezing the bulb, as has been pointed out by Dr. Flint in connection with tapping the chest.

That the simple tube will answer for all fluids from the abdomino-pelvic cavity, except the thick mucilaginous variety of the ovarian fluid which can never be extracted by aspiration, I can affirm from experience.

(6.) *Rubber tubing* of various sizes I never fail to carry in my bag. Little pieces of it drawn over knives and trocars protect their edges and points much more efficiently than corks, and do not fall off so readily.

(7.) This knife (instrument shown) on a long staff is designed for operations in the interior of the womb; I protect the cervix or, if no speculum be used, the vagina by passing the blade into a rubber tube through a longitudinal incision at about its middle; the tissues are thus protected from the sharp edge during the manipulations necessary to bring the knife into the proper position; by the free end of the tube, which projects from the vulva, I then drag the tubing up the staff of the knife, uncovering the blade.

(8.) I used to be much troubled by the *sticks of solid nitrate of silver* not fitting my holders, and by their breaking when the ring was forced down. By pushing them into pieces of tubing of suitable size and cutting off enough of the latter to uncover their points, I make them fit the holder and preserve them from being broken.

(9.) *Urethral Dilators*. I have rarely had difficulty in dilating the female urethra with my fingers, beginning with the little one; but on several occasions the outer half of the urethra has been so unyielding, owing to chronic urethritis, as to resist all my efforts. In the first case I overcame the resistance by inserting dressing forceps, — such as are specially adapted to general gynecological purposes by the narrowness of the blades and the length of the handles, — and opening them forcibly. This procedure effected the object, but the blades kept nipping the walls of the urethra, and their tips caused considerable laceration of the canal. To obviate these casualties, I next time passed the blades into a piece of tubing through a longitudinal slit two inches from its end; the instrument, thus protected, could be opened very wide without the

possibility of injury to the urethra; the free end of the rubber can be held so as to prevent its accidental escape into the bladder. Although this improvised dilator may not be quite so convenient as Sims's, yet it will prove a very handy substitute.

(10.) *Elastic Pessaries.* The well-known rings of watch-spring, covered with soft rubber, have been popular because of their comparative harmlessness and the ease of their introduction. The chief objection to them is their dilating the vagina so much laterally as to shorten it in length, and if they are long worn they weaken its walls. To prevent this lateral distention I one day slipped on a common rubber band, which worked well as far as the pessary was concerned, but was found, two weeks later, to have nearly amputated the cervix uteri by the friction of its sharp edge. For the band I substituted a ring made of tubing by pushing its two ends over a piece of an English catheter about three fourths of an inch long, and of the same size as the tubing. This improvised elastic band had, of course, no edge which could cause ulceration by pressure or friction, but would slip off the pessary when the latter had been lubricated by oil or the natural secretions of the vagina. A piece of silk tied round the apposed portions of the band near the ring at each side rendered it immovable, and gave me an instrument which acts admirably in many cases where Hodge's pessary and others are contra-indicated by the presence of a hymen, a tender prolapsed ovary, etc., etc.

I offer this pessary to general practitioners as being very efficient and perfectly safe. Though I believe that specialists are best qualified to choose the pessary which is adapted to an individual case, yet I deem it all important that every practitioner should be able to treat any ordinary displacement of the womb; for this purpose it is desirable that he should have a pessary that is easy of insertion and harmless in its operation, even if it be not quite so well adapted to support the uterus, rather than more complicated and harmful instruments.

DR. BOWDITCH asked Dr. Chadwick whether, in using a siphon with a long tube for evacuating the contents of the abdominal cavity, it was not probable that the tube would become clogged by a coagulable fluid.

DR. CHADWICK thought it possible.

Treatment of Fistula in Ano. — DR. JOHN P. ORDWAY read a paper on this subject in which he took decided grounds against the use of the knife, especially in deep-seated fistula, advising instead local applications with expectant rather than abortive treatment. He had treated successfully since January 1, 1868, three hundred and forty-three cases of fistula in ano, watching each case until permanently cured. They included all the different varieties, and the most important would be reported, with the plan of treatment, in a work on Diseases of the Rectum and Anus, which he was compiling. He advised, before making any examination, clearing the bowel thoroughly with an enema of warm water, castile soap, and olive oil, without which no proper examination could be made, either tactile or ocular. The table should stand about four feet high and, as in hospital practice, be so arranged that the physician can pass around it, and use either hand without stooping or over-exertion. Whenever examining a case at the patient's house, an impromptu table of this kind should be

required, thereby conducing greatly to the comfort of both physician and patient, as well as insuring a correct diagnosis.

Dr. Ordway showed the members present a new form of speculum which was made for him, open on four sides, with the exception of an eighth of an inch at the end, the object being to save turning the instrument and to give a more complete view of the parts. He stated that he thought a more useful one could be made by being open at both ends. The Allingham speculum was undoubtedly the best in use, but could be improved by more side openings. In withdrawing it pass the little finger, instead of the plug, into the speculum. This simple manipulation will give great ease to the patient, and will prove of practical value to the physician. No class of diseases requires more care or watchful attention than diseases of the rectum and anus; the greatest patience is needed and the utmost caution must be observed in the treatment to avoid abortive means, rather inclining towards assisting than forcing nature's laws. How often the most simple form of fistula has become complicated by too great haste in operation! The abscess which forms previous to the fistula owing to the peculiar position of the muscles, should be opened with hydrate of potash sharpened to a small point. The form of the probe used by Dr. Ordway was also shown, and is somewhat different from those commonly used in the examination, being longer than the ordinary kind, with a round instead of flat needle eye, and, by its increased length, giving more power with less liability to spasmodic contraction of the sphincters. In passing the probe it should be done slowly, without the finger in the bowel, until it has entered as far as possible; then, the surgeon passing the finger, the contracting muscles will generally yield readily, and if the fistula be complete, very little difficulty will be experienced in the passage. After entering the bowel thread the probe with a single strand of large-sized silk, to which attach a large *mèche* composed of several strands of silk; draw this through, and for a few days it will allay inflammation to a great extent by preventing any fecal passage through the canal. If it becomes necessary to change the tent from time to time, by fastening the new one to the old, you avoid the painful operation of repassing the probe. The caustics which Dr. Ordway has been the most successful with are what are termed vegetable caustics, and can be applied by injection; or a few grains of the powder may be placed upon the *mèche*, and drawn back and forth to create inflammation and destroy the induration. The advantage of vegetable over mineral caustics is that they do not decompose healthy tissues. Upon these they exert but feeble action, and in unhealthy conditions they bring about a normal action without exciting any great amount of inflammation. One form of caustic used is the sesquicarbonate of potash, made by dissolving the bicarbonate of potash in a sufficient quantity of water; strain, evaporate, and then dry the resulting sesquicarbonate by a gentle heat. This is a mild preparation. If the fistula be extensive and deep seated, a more active caustic is made from oak-wood ashes evaporated to dryness. Both of these preparations should be made by a thorough chemist, as the first, particularly, will be inert from its impurity unless great care is used in making. The hydrate of potash, used in some cases in the proportion of ten or even twenty grains to the ounce of water, is effective provided it is not allowed to remain

too long in contact with the parts, its action being checked by the free application of vinegar. Iodine and Filhos's caustic are also useful in some cases.

Dr. Ordway said that he had treated thirty-four cases of fistula in ano by the rubber ligature with good results, but they were very superficial and not complicated with any collateral sinuses. He could not but think that Allingham's report of cases cured by elastic ligature must have been somewhat premature, for those cases which he had seen, where the sphincters were cut through from being divided too soon, were even worse than when separated by the knife.

After the induration is removed to a certain extent, Dr. Ordway's plan is to tighten the ligature slowly by twisting with a "toggel" for a few moments every day when the proper time has arrived, and as a result the fibres of the muscles reunite nearly as fast as they separate; there is no loss of power, and the patient can attend, as a general rule, to the ordinary duties of life by wearing a bandage with the application of benzoated oxide of zinc or red lead ointment to the parts; thus the general health may be kept up more easily than by confinement to the house. This mode of treatment would apply to most cases unless something were to contra-indicate it. The time employed in the cure varies from six weeks to six months, or even longer, but if thoroughly and carefully watched the results are good, and the great safety attendant upon this form of treatment cannot but recommend it to those who use it.

Dr. CHADWICK inquired how the pain was controlled.

Dr. ORDWAY said by injecting vinegar, and that a minute internal opening could be detected by injecting warm water.

In response to a question by Dr. Wheeler, Dr. Ordway said that he began his treatment as soon as the acute stage had passed.

Dr. WHEELER inquired whether caustic of uniform strength was used.

Dr. ORDWAY said no, but that each case must be treated according to the circumstances.

Dr. HENRY A. MARTIN said that he was a member of another district society. He was much interested in the subject of the paper which had just been read. It, with the other diseases of the same region, had largely engaged his attention for nearly thirty years. He would, if the society permitted, make some remarks on that paper. He would not presume to make this request were it not that he had received written invitations from several members of the Suffolk district, and the requests were accompanied by a suggestion that he should address the society.

Permission having been granted, Dr. Martin said:—

Some years since I read in one of the medical journals a paper said to have been delivered before this society. I read the paper with astonishment and indignation that any society should have, even by listening to it, tolerated its reading, that any member should have dared to offer such a production. The paper alluded to gave a sort of narrative of several cases, and indicated a vast multitude more, in which physicians, and often many in succession, had utterly failed, while the writer had perfectly succeeded by means of a treatment entirely different from that usually practiced, and which he claimed to be infinitely superior, and, of course, of the greatest possible value and importance to the profession; but there was not the slightest indication what that treat-

ment was. Medical, or rather pseudo-medical, literature is no stranger to such productions. The lamented Swaim, the disinterested Bodenhamer, the erudite Sweet, and many, very many more "of that ilk" had written and published just such cases by the thousand in their numerous productions, cured by the use of remedies and methods of treatment the composition and processes of which were kept in the most profound secrecy. The game is an old one, and will probably never become obsolete. So long as the multitude wishes to be deceived there will always be plenty to deceive it, and nowhere has this game been more neatly and successfully played than here in Boston. When I was informed that a paper was to be presented to-night to this society by the same author and on the same subject I could only presume that the writer had discovered the error he had committed, and now proposed to give the society the results of a still larger experience and a clear and full professional statement of the remedial means and processes by which he claimed to have achieved success superior to that of other surgeons. I came with a vague sort of hope which, I need hardly say, has been utterly disappointed. The paper we have heard is simply nothing, at any rate nothing to this society. The writer has exhibited some common rectal specula and probes, not of the slightest interest or novelty. No narrative of a single case and no intimation as to treatment that could by any possibility be of practical use to any one. One thing we can gather, that this mysterious treatment of fistula in ano is by means of various caustics, generally of an alkaline character. This will-o'-the-wisp mystery is claimed to be not a revelation from the living but an exhalation from the grave of a certain defunct quack, whom the writer apparently considers to have been its inventor.

But, seriously, what is this caustic treatment of fistula and other rectal diseases? Why, Mr. President and brethren, it and the use of alkaline caustics as a means for opening abscesses are both among the abominations and horrors of mediæval and classic surgery. If you love old books as I do, some of you may have read the tract of Hippocrates on *Fistulæ*. I have it here, but will not read it; enough that in it and Paul of *Ægineta*, and *Ætius*, and on through Celsus and Galen, you will find every possible variety of treatment by means of caustics; among them this very one by the lye of wood ashes or caustic alkali, by ligatures smeared with caustic solutions and pastes and salves; but these works of the venerable fathers, or rather great-grandfathers, of medicine and surgery give a clear, practical idea of what was intended, and how it was brought about. Bad as was the method, it is honestly stated; all is clear and plain and professional; words are not used to conceal ideas and methods, but to make them intelligible. Hippocrates practiced nearly two thousand five hundred years ago. This method of treating fistula was the method employed for over twenty centuries; and when you come to the Arabian writers and those of the Renaissance, to Fabricius and Vesalius, old Guy de Chauliac and Paré, and so on to Wiseman and the rest, you will find how they lament its imperfection, and how often, through it, fistulæ failed of benefit or remedy. It was not till the last century that we find a name, one of the greatest in our annals, the worthy teacher of the great John Hunter; in a luminous and exhaustive treatise, the best beyond all comparison ever writ-

ten on this disease, with all the experience of England's greatest surgeon, with a practice far beyond any predecessor in extent, Percival Pott flung aside and forever, so far as true surgery is concerned, the abominable farrago of the cautery, actual and potential, as well as the hideous treatment by complete excision, and substituted for it the accepted treatment, the result of which, in properly selected cases, performed by competent operators, and subsequently tended with proper assiduity, is speedy, complete, and permanent cure as a rule, so general that the exceptions only prove it. Why did those great, those greatest men, Hippocrates and Paré and a legion more, for so many centuries use caustics in the treatment of rectal fistulæ? Why, in the utter failure of the caustic treatment, except in the simplest cases, did they excise the whole indurated tract of the sinus, and then sear the wide-gaping wound with the incandescent cautery? Simply because they considered that induration an evidence of malignity, and as they would have burned away with caustics or excised with the knife all of a scirrhus, so they thought they must remove every particle of this induration. Another reason was their dread of hæmorrhage; and this is the reason, or one of the reasons, why modern charlatans outside our ranks, and inside, too, employ them. When a gentleman's knowledge of anatomy is, unfortunately, so imperfect that he does not feel *quite* sure that the carotid artery or the arch of the aorta may not be somewhere in his patient's fundament, he will be very apt to prefer strings and soap-making caustics to that instrument which in the hands of a surgeon is salvation, in those of a quack destruction and death. Boston is gaining a bad eminence by the practice here by regular physicians of this essentially irregular mode of treatment, — this pseudo-revival of a long and most justly abandoned method of ancient surgery. This revival is due to the great pecuniary prosperity of a man who grew into notice and fame and fortune under my very house's eaves. I know the man's history well. Some thirty years ago, when I first settled in the southern borders of this city, he was the teacher of a primary school, utterly ignorant of medicine or surgery, even of the veterinary sort, but richly gifted with that audacity which Danton said was "everything," and the mendacity which is the quack's unfailing revenue. I first heard of this fellow, while he still practiced petty pedagogics, as the possessor of a wonderful Indian secret. This triumph of that subtle aboriginal genius, whence has flowed such a multitude of similar specifics, was a mixture of caustic potash, powdered bloodroot and flour; these were mixed with water to form a paste, or rather a sort of dough, which he carried about with him, and without fee or reward plastered on every ulcer and wen he could get at. His fame for "removing cancers" spread far and wide, and many people showed, as perfect and triumphant proof of cure, black, ragged sloughs, suspended in bottles of whisky. Very soon, school-teaching was given up; and very soon, too, Dr. Presto slipped into that specialty of gynecics, which was, *then* at any rate, an immense hot-bed of charlatany and humbug. Very soon a large number of leucorrhœal women, with "ulcers on the womb," were under his care, and the dominant quack in that specialty waxed *small* indeed before Dr. Presto. His process was simple: the patients were examined with the speculum, pronounced to have "ulcers,"

and to be suffering from "incipient cancer." The os was plastered with the paste; a little vinegar was squirted in; by and by a black mass would come away, which, if large enough, was preciousely preserved in whisky. After a patient had gone through three or four hundred, or more, dollars' worth of these "operations," she was pronounced "saved," with leucorrhœa as bad as ever, or worse, but the cancer gone; for was n't it in the bottle?

You may depend upon it that if Dr. Presto had not been known to enjoy one of the largest incomes ever derived from practice in this city, there would have been no such eager inquest for his secret, nor such a boast of its exclusive possession by a regular physician. Why is it that a class of diseases most thoroughly investigated and understood, the best treatment of which is perfectly established, the results of which treatment, properly conducted, are solid and satisfactory beyond perhaps any other, is and has been always so largely in the hands of the quacks? One thing is the dread of the knife. The people are frightened away from us by constant, doleful, and mendacious stories of the horrors of "the knife." It must be acknowledged, however, that there is another great and leading reason. These cases are shirked by the profession. Occurring now and then in general practice, they seldom get from the general practitioner that careful, exact, and thorough examination and treatment which alone can achieve the best results. They are treated with astringent and sedative suppositories and salves, tar soap and Garot's pomade, by dabbings with nitric acid and with argentic nitrate, with injections of iodine, and other such nothings, in these cases, at any rate, as are poultices of fire-weed and M. Trousseau's remedy for fissure, the extract of ratany, which was no remedy at all, and certainly never cured a case of the true disease or even much benefited it. This last remedy, by the way, shows the infinite harm and error a very great man may be at the bottom of when he leaves the field in which he is *facile princeps* and presumes to equally great experience in another. Trousseau was a great physician; when he traveled into the domain of surgery he was not great or reliable.

By and by the patient slips into the hands of the quack, whose methods, if very bad, are thorough and often effectual, and the patient who has been nominally treated by often a dozen regular physicians is cured by a charlatan. How much honor, gentlemen, do you or your profession gain by such cases? They are far from uncommon. I do not blame any one for not liking to treat diseases of the rectum. Either treat them thoroughly and efficiently, or send them to some one who is willing so to treat them. If you do not, they will surely eventually glide into the hands of the specialist or quack, generally the latter, without your consent being given or even asked, little to your credit comfort, or profit. You can easily find men you can respect and associate with, and to whom you can recommend your patients with a clear conscience, or nothing can be more sure than that sooner or later they will fall away from you, and generally into the ever-gaping maw of the quacks, those *burning* shames. We can never hope that charlatanism will become extinct. (It would not be difficult to demonstrate that one of the great needs of our imperfect nature can no otherwise be met.) But we *can* and must try to keep the taint of *real* quackery from ourselves and our societies, and I have spoken

here to-night because I feel sure that it is in no way going to honor the profession of Boston to revive the caustic treatment of fistula, or to approve such papers as that which we have just heard.

DR. ORDDAY said that he regarded nothing in Dr. Martin's remarks as personal to himself; that he had treated three physicians, two of them members of this society, with success; that he presented his paper in good faith and believed what he said.

DR. WILLIAM READ remarked that he should agree with Dr. Ordway in his disuse of the knife in treating fistula in ano, but that his experience had not been long enough as yet to warrant him in coming before the society with his cases. It was perfectly true that this disease could be treated with success without cutting, and the number of those who had been operated upon and failed of a cure was large enough to cause a serious inquiry whether that was the best mode. The only way in which this could be settled was by coolly and calmly bringing our minds to the investigation in a strictly scientific way, subjecting each method to a judicial review, avoiding assertion and prejudice, and allowing the facts in the case to determine the verdict. He had seen within a year two cases where the knife had been used with very bad result. One of them was an old gentleman, more than sixty years of age, who had been cut three times. For many years he thought he was doing very well, but as old age crept on, and the power of reparation became impaired, the cicatrices of the cuts partially opened and ulceration took place, making him constantly miserable. The contraction of the sphincter made it impossible to pass the finger in beyond the first joint, and there was the greatest difficulty in relieving the bowels. It could only be done by means of enemata and digging away the feces with a small piece of sharpened wood. In the other patient there had been no union at all. He presented a V-shaped opening, perfectly covered with mucous membrane, into which three fingers could be placed. He could not control his feces at all. Now, if these results could follow the operation by the knife, was it not time to consider whether there might not be some better way? No surgeon could tell in any given case whether he is going to get good union or not. If his patient did well it was all right, but if he did not, if the union did not take place, then the last state of that man was as much worse than his first, when he had only the fistula to contend with, as could be imagined; whereas by the other method, where no knife was used, if no cure were accomplished, the patient was simply where he was before,—no better, no worse. In one sense he was better, for the application of the caustic took away all the morbid sensibility of the part, and with a little care in injecting some mild stimulant wash scarce any trouble was felt. This is more particularly the case with those fistulae which open above the sphincter ani and have their external orifice *outside* that muscle. There is a class of fistulae located within the sphincter, in the loose tissue at the anus, which do well under any treatment, and success can always be predicted; but it is the deep-seated, tortuous, calloused sinuses, with openings sometimes many inches away from the anus, both externally and internally, which should make us pause before cutting. The method used by Dr. Read differed from Dr. Ordway's. He was in the habit of passing a silk ligature looped over the end of the finger

into the rectum; the probe passed through the fistula from the *outside* met the finger in the rectum, and the loop of silk was caught in a slight notch in the end of the probe and one end drawn through outside. The ends of the ligature were then tied to secure them. This gave control over every portion of the fistula, and whatever was to be applied could be easily brought in contact with every part of it. A solution of potassa fusa, one ounce to an ounce of water, made into a paste, was then smeared on a bit of lint or several threads of embroidery cotton, tied to the ligature, and with this the fistula was scoured out. He had followed this treatment for the past four years, and as yet had seen no reason to change. In one case there were four fistulæ, one of which had been of more than twenty years' duration; another, which came seven years later, broke into the rectum exactly opposite the first, so that an injection of solution of permanganate of potash thrown into one external opening came out at the other. There were also two more recent fistulæ near the anus. The treatment stated before being followed, these were all healed in the course of six months. The patient was sixty-five years old, and had been given up by everybody. Three attempts had been made to operate, but the great depth of the sinuses deterred the surgeons in attendance from cutting. Now, if the cure by caustic had done nothing more than to cure this man, it had accomplished a great deal. In conclusion, Dr. Read hoped that the society would see the advantage of investigating this subject, of divesting itself of all prejudice, and of deliberating calmly and coolly. Let the issue go in the direction of the greatest amount of proof, whether it accord with our preconceived ideas or not.

DR. MARTIN asked what was done by the use of the caustic; whether the septum between the fistula and bowel was divided or not.

DR. READ said that as far as he could judge potash gave tone to the parts and dissolved the tissues; that the muscle was not divided, but the pyrogenic membrane was absorbed by the action of the caustic.

DR. ORDWAY said that he had never kept a patient in the house after treatment, but had found a simple dressing of oxide of lead ointment, kept in place by a belt, sufficient.

Ovariectomy.—DR. JOHN HOMANS reported the case of a girl, sixteen years old, from whom he had removed a multilocular cyst of several months' duration. The operation was performed under carbolized spray, at the Carney Hospital. The pedicle was tied with catgut ligatures. The wound healed in one week by first intention, and in three weeks the patient was well. The case will be published in fall.

SANITARY SCIENCE

THE impetus given to this branch of medicine of late years in England and elsewhere has already for some time been imparted to the profession on this side of the Atlantic. Its influence has, however, been felt none too soon, for the rapidly increasing size of most of our large cities had brought with it evils which could not be offset even by unusual natural sanitary advantages. The origin of the science in this part of the country may be said to date from the organization of our State Board of Health, previous to which

period physicians were content to leave matters of the most vital interest to the health of the community to men whose chief qualification for the important duties allotted to them was their standing in the political world. Doubts were freely expressed as to the utility of trained experts in matters of sanitation or the value of the work which such a board could accomplish, — doubts which, in some cases, were shared by members of the profession. In the few years which have elapsed its great value has been fully vindicated, and we venture to say there are few residents of the State, either in the profession or out of it, who do not turn with a feeling of confidence and relief to this source for a solution of the many sanitary problems which are pressing sorely upon us. The presence of such a body has helped to educate the profession in sanitary science, which already has become one of the recognized studies of the Harvard Medical School. The influence of its work has been widely disseminated throughout the country.

At the present time, when the great question of adopting a plan of sewerage for the city of Boston has been brought to that point that the whole subject has been placed in the hands of the city government for final decision, it is with satisfaction that we recall the prominent part which has been played by the profession in this matter, and the assistance which numerous recent publications on sanitary science will contribute in giving shape to the final plans. The activity of this special branch of the profession at the present time is exceedingly creditable, and deserves due acknowledgment. It is by such means that we can maintain that standing and power in the community which the medical profession should always hold.

The eighth annual report of the State Board of Health teems with subjects of interest in connection with this project. Its able secretary, Dr. C. F. Folsom, contributes largely to this department, which treats of the pollution of streams, the health of towns, the disposal of sewage, and other subjects of equal value. (We shall hope to be able to review at length the various special reports in the volume.) A paper read this spring before the American Statistical Association by Dr. Folsom, on the various methods of providing for the filth of large cities, we commend to the attention of all who take an interest in the future health of Boston or of the many other of our cities sorely in need of sanitary improvement. For ourselves, after a careful study of the subject, we are content to abide by the plan offered by those most competent to judge, the sewerage commission, as the most thorough and comprehensive, and which has been fully tested in the light of sanitary science. The era of sanitary reform through which the city is now passing affords a study worthy of careful consideration by the profession in other sections of the country.

MEDICAL NOTES.

— In an article in the *Practitioner* for April, 1877, on the Use of Weak Solutions of Saline Drugs, W. F. Wade, F. R. C. P., advocates the administration to patients of such solutions prepared artificially to resemble the various mineral waters of established repute. The salts in these waters in no way differ from samples made in the laboratory of the chemist, but the fashion in which

they are mixed by nature is very different from that in which we are accustomed to order them to be mixed and taken. For example, if we give a patient two scruples of carbonate of soda, we probably put it into an ounce of water, whereas nature at Vichy puts it into about sixteen ounces. If we give two scruples each of sulphate of soda and sulphate of magnesia, we put them into an ounce or an ounce and a half of water; nature at Friedrichshall puts them into sixteen ounces. Here, then, is a very material difference between the artificial and the natural prescriptions. We may readily imitate the exhibition of these natural waters by ordering an ounce of a mixture containing the proper amount of salts to be added to ten or fifteen ounces of water, and drunk either at once or in divided doses before breakfast every morning, or, if the patient be willing, it may be still further diluted. After further discussion of his topic, the author concludes his paper as follows:—

“It seems to me, then, that we can make, if rude, yet very effective imitations of some of the most potent mineral waters, and, secondly, that we can compose even better mineral waters than those which nature has provided.

“If, for example, we wish to act only on the liver, we can use the sulphate of potash by itself, whereas if it is necessary or appears desirable to conjoin purgation, we may add a suitable quantity of sulphate of soda or magnesia, as we think best.

“If we wish to act only on the kidneys, we can use carbonate of potash with citrate of lithia, combined with small doses of iodide of potassium or any other potash salt which we may prefer, and, indeed, if we desire to do so, the soda-salts likewise, and we add, if required, a purgative salt.

“If, as is perhaps most often the case, we think proper to act upon both liver and kidneys, we can combine any of the above-mentioned drugs. Nor is it difficult to utilize salts of iron and manganese, though I have not yet done so. The addition of chloride of sodium, a prominent constituent of so many natural waters, makes the mixture to most persons less unpalatable.

“I generally order the dose to be taken in warm water, as this mixture is, in the absence of carbonic acid, better tolerated by most stomachs, but cold water may be more agreeable to some, and, indeed, there is no reason why an aerated water, as, for example, Apollinaria, should not be employed as a vehicle. A course of this kind should be continued for from three to four weeks, or, in some instances, even longer, to have a fair chance of success.”

— Dr. Thain, *Canadian Medical Journal*, 1876, page 413, believes that gargles of alum, tannic acid, and similar astringents are useless for the purpose of astringing the vessels sufficiently to “press back” the inflammation in quinsy. His plan is to apply, externally, hot fomentations, with a few drops of turpentine, to the throat, and then to wrap the whole neck in flannel. Constant heat, moisture, and mild counter-irritation are to be kept up by frequent changing of these applications. The feet must be at once put into a hot mustard bath, and if the patient will then get into bed between blankets, so much the better. Gargles as hot as can be borne must be begun as soon as possible, and the most useful is a solution of carbolic acid, one part to forty of water. If the patient cannot gargle, carbolic acid in glycerine (one part to twenty or thirty) should be frequently applied by means of a feather to the parts. A briar sa-

line aperient may be advisable. By this plan of treatment the inflammation subsides in a few hours, never running on to suppuration, and then a single alum gargle may be serviceable.

— From our British exchanges we learn that the emperor of Brazil, Dom Pedro II., has recently visited St. Thomas's Hospital, and was also present at the annual *conversazioni* of the Royal College of Physicians. The *élite* of the profession were largely represented, and numerous articles of science and art were exhibited. The Paris correspondent of *The British Medical Journal* writes regarding the visit of the emperor to Paris: "Dom Pedro is a most indefatigable man, and the interest he takes in all that touches the arts and sciences, works of industry in general, agriculture, public instruction, etc., led him wherever there was anything new to learn. The emperor never missed a single weekly meeting of the Academy of Sciences, of which he has been elected a corresponding member. This election is considered an exceptional favor, as by the rules of that learned body the door is shut against sovereigns.

"During his stay in Paris he served as representative between his French colleagues and the *savants* of his own dominions." He presented at the meeting of June 4th some interesting communications of the highest importance in a scientific and industrial point of view. Besides being corresponding member of the Academy of Sciences, Dom Pedro is a member of the geographical and anthropological societies of Paris.

— The cultivation of the cinchona-tree seems to be meeting with marked success in India. The government plantations at Darjeeling are reported to be in a flourishing condition, producing about fifty tons of dry bark each year. From this bark about three and a half per cent. of medicine can be extracted, so that the plantations are already capable of furnishing to the hospitals in Bengal two tons of quinine and other preparations of cinchona. It is estimated that each native throughout Bengal needs on an average five ounces of quinine per annum, and at this rate it would require an annual supply of twenty-nine tons to suffice for the wants of this presidency.

— Dr. M. R. Speare, of Rochester, New York, describes a form of paper splint which he uses as a substitute for the plaster-of-Paris bandage. He thus describes it:—

"For the purpose I employ strong manilla paper and book-binders' starch, which consists of flour and water boiled to the consistency of jelly. I first prepare my paper by cutting it into strips long enough to encircle the limb at its greatest circumference, and varying from half an inch to an inch and a quarter in width. Having an assistant with the starch and a brush ready, I apply a flannel roller as far as I wish the splint to extend; then smear this with the starch, apply the strips of paper—after starching—the same as a many-tailed bandage, brush this over with starch again, and apply another layer as before, until I get the required thickness, which is usually six or seven layers, according to the firmness of the paper used. The whole process will occupy about fifteen minutes. When this is dry, which will take two or three hours by the aid of hot bricks or sand-bags on each side of the splint, it is very light and comfortable, fitting as nicely as a stocking, and is as firm as the same thickness of wood."

A specimen which we have seen shows a tolerable degree of strength, but is not by any means equal to the silicate-of-potash bandage.

— Dr. Edward Warren (Bey), a prominent American physician of Paris, has just been created a Knight of the Order of Isabel the Catholic, as a recognition of the professional skill displayed by him in the successful treatment of some Spanish personages of high position.

NITRATE OF PILOCARPINE.

MESSRS. EDITORS, — Permit me to call the attention of your readers to the very convenient means now accessible for producing the inimitable diaphoretic and sialagogue effects of *jaborandi*. I refer to the nitrate of its alkaloid, pilocarpine. This may be administered subcutaneously without trouble, and produces within five minutes a distinct moisture of the skin, and in a few minutes more profuse sweating and flow of saliva, lasting for some hours.

In a case of Bright's disease (parenchymatous nephritis of an extreme degree), where the hot-air bath failed to procure diaphoresis, and where *jaborandi* in infusion was vomited, the subcutaneous injection of a little more than one fourth of a grain of nitrate of pilocarpine produced abundant sweating and copious flow of saliva. The injection was several times repeated, as much, however, for the great relief afforded by its sialagogue action to the distressing dryness of the mouth as for the mitigation of the general symptoms, although the patient at first expressed himself as feeling much more comfortable after its action.

It has been used with similar results in two other cases, once in each. The therapeutic value of this drug cannot be considered at present as well determined; but such a convenient method of administration ought soon to furnish sufficient data for this purpose.

A solution of nitrate of pilocarpine grs. iiss or 0.16 gramme, aq. destill. ʒi. or 4 grammes, of which six minims or c.c. 0.4 may be injected, is of convenient strength.

I wish also to say a word of the value of picric or carbazotic acid as a test for albumen. It is said both by Professor Tyson and Professor Bowditch that it is less sensitive than either nitric acid or heat. Dr. Tyson, however, gives an erroneous method for its use. He says the picric acid is dropped into the urine, "when each drop as it passes through the urine is followed by an opaque white cloud." Picric acid does not "pass through" urine unless dropped from some distance, since a saturated solution thereof is *lighter* than urine.

The tube should be filled with the acid and the urine dropped in; when in a favorable light a cloud can be seen even from quite dilute solutions of albumen.

A specimen of urine which in its natural condition showed a considerable quantity of albumen still gave, when diluted twenty times, a perceptible cloud in a good light. It also gave a faint white ring with nitric acid, which also required a favorable light to be seen. It is possible that beyond this point a minuter trace could be detected with nitric than with picric acid. Diluted

forty times neither test detected it. I doubt, however, whether with colored urine (the dilution in this case being made with water, which of course diminished the color in equal proportion to the albumen) the nitric acid precipitate could have been any more easily seen than that with picric acid. Again, Dr. Tyson says, when speaking of the heat test, "Acetic acid is preferred to nitric for acidulating the urine, because if the quantity of albumen be small it may hold it in solution by nitric acid" (page 37). This fallacy is not avoided by the use of acetic acid unless great care is used.

A specimen of which five c.c. when acidulated with one drop of acetic acid gave abundant white flocculi on boiling, when acidulated with five drops gave hardly more than opalescence, and remained clear when a little more was added. Sulphuric, muriatic, and oxalic acids have the same action, while picric even in large proportion does not, so that it is useful as an adjuvant to the boiling test. Finally, it shows one form of albumen of which neither nitric acid nor heat give the least indication.

R. T. EDES.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 31, 1877.

	Estimated Population, July 1, 1877.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1876.
New York	1,077,228	754	36.39	27.46
Philadelphia	850,856	438	26.77	22.88
Brooklyn	527,830	300	29.56	24.31
Chicago	420,000	258	31.94	20.41
Boston	368,940	197	28.14	23.39
Providence	108,000	43	21.71	18.34
Worcester	52,977	19	18.65	22.00
Lowell	53,678	16	15.50	22.21
Cambridge	51,572	33	33.27	20.54
Fall River	50,372	25	25.80	22.04
Lawrence	37,626	25	34.55	23.32
Lynn	34,524	11	16.57	21.37
Springfield	32,976	13	20.49	19.69
Salem	26,739	8	15.56	23.57